Measurements of the Vapor-Liquid Coexistence Curve in the Critical Region for the Refrigerant Mixture HFC152a/HFC125

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Measurements of the vapor-liquid coexistence curve in the critical region for binary refrigerant mixtures of difluoroethane (R152a) and pentafluoroethane (R125) with three compositions of 80, 85 and 90mass% R152a have been carried out. The measurements involve visual observation of the disappearance of the meniscus of the sample at the vapor-liquid interface within an optical cell in the temperature range between 293 K to 383 K. The critical temperatures and densities at three different compositions for the R152a + R125 system were determined on the basis of the saturation along the coexistence curve in the critical region. In addition, the critical locus for the R152a + R125 mixture is correlated as a function of composition.